



Information and Communication Technology (ICT) As a Tool for the Achievement of Millennium Development Goals in Nigeria

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Abstract

The Millennium Development Goals (MDGs) are set targets for reducing poverty, hunger, disease, illiteracy, environmental degradation and discrimination against women by 2015. The achievement of these goals in Nigeria may not be feasible predominantly due to poor resource utilization, pervasive corruption and heavy external debt burden. We suggest the use of Information and Communication Technology (ICT) to enhance the achievement of MDGs in Nigeria since ICT has become a veritable tool for proper governance and empowerment of the people.

Keywords: Millennium Development Goals, Sustainable Development, Information and Communication Technology, Nigeria.

1.0 Introduction

Poverty remains a global problem of huge proportions at the start of the twenty first century despite the great efforts made at reducing it and improving the overall well-being of mankind in the last century. The World Bank quarterly report (2002) showed that of the world's 6 billion people, 2.8 billion live on less than \$2 a day and 1.2 billion on less than \$1 a day. Six infants of every hundred do not see their first birthday while eight of the remaining ninety-four do not survive to witness their fifth birthday. Of those who do reach school age, nine boys and fourteen girls in every hundred do not attend primary school. This trend shows extraordinary diversity in experience in different parts of the world and large variations among regions with some witnessing advances and others setbacks. The widening global disparities have increased the sense of deprivation and injustice for many, while social mobility and equal opportunity remain alien concepts to many people across the globe.

The dark patches of these statistics lie in the developing countries of Africa, Asia and Latin America. While the Latinos and Asians are steadily leap-frogging out of this development conundrum

(Reddi, 1986), Africa is still generally crawling and in some places, actually suffering developmental recession despite the vast wealth in human and materials resources that abound in some of its regions like Nigeria.

Nigeria with population of about 150 million people constitutes 0.02% of the global population. In 1980, an estimated 27% (i.e. about 20 million) of Nigerians lived in poverty, while in 1999 about 70% of our population lived on an income of less than \$1 per day. This poverty trend has however been on the increase (NPC, 2001). If the present trend continues, the country is unlikely to meet the set developmental goals of the Millennium Development Goals (MDGs).

However, some of the measures introduced to stem the tide include the institution of anti-corruption agencies e.g. the Independent Corrupt Practices and Other Related Offences Commission (ICPC) and the Economic and Financial Crimes Commission (EFCC) and major developmental initiatives for example, the National Economic Empowerment and Development Strategy (NEEDS) the National Poverty Eradication Program (NAPEP). We posit that with the inclusion of robust Information and

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Communication Technology (ICT) initiatives, these efforts can add impetus to the achievement of the MDGs.

2.0 Millennium Development Goals (MDGs)

The United Nations Millennium Summit held in September 2000 in Paris, France adopted eight goals called the Millennium Development Goals (MDGs) which set clear targets and indicators for reducing poverty, hunger, disease, illiteracy, environmental degradation, and discrimination against women by 2015, while at the same time promoting global integration. The MDGs are aimed at attaining and ensuring sustainable development through the significant improvement of humanity. Participating countries are expected to articulate their policies, strategies and plans, while the United Nations (UN) Development System will work closely with countries to facilitate each nation's efforts at achieving the MDGs. A set of targets and indicators have been defined for each of the MDGs and are used to track the progress in meeting these goals. These include;

- i. Eradicate Extreme Poverty and Hunger.** The target is to reduce by half the proportion of people living on less than a dollar-a-day and those who suffer from hunger by 2015.
- ii. Achieve Universal Primary Education.** The target is to ensure that all boys and girls by 2015 will be able to complete primary education.
- iii. Promote Gender Equality and Women Empowerment.** The target is to eliminate gender disparities in primary and secondary education preferably by 2005, and at all levels by 2015.
- iv. Reduce Child Mortality.** The target is to reduce by two third the mortality rate among children by 2015.
- v. Improve Maternal Health.** The target is to reduce by three quarter the ratio of women dying during childbirth by 2015.
- vi. Combat HIV/AIDS, Malaria and other diseases.** The target is to halt and begin to reverse the spread of HIV/AIDS, malaria and other major diseases.
- vii. Ensure Environmental Sustainability**
The target is to integrate principles of

sustainable development into policies and programs and reverse the loss of environmental resources by 2015. It will also reduce by half the proportion of people without access to safe drinking water in order to achieve significant improvement in the lives of at least 100 million slum dwellers by 2020.

viii. Develop a Global Partnership for Development. The target is to develop further an open rule based, predictable and non-discriminatory trading and financial system (which include commitment to good governance, development and poverty reduction).

2.1 Nigeria and the MDGs

Nigeria, Africa's most populous country is endowed with huge human and materials resources to drive sustainable development and emerge as a leading economic force in the world. Nevertheless, Nigeria is ranked high among the poorest countries in the world. Adeyemo (1991) has attributed this to:

- i. The heavy external debt burden that has affected finances and the economy.** For example, in 2000, Nigeria's debt services obligation was over 5% of Gross Domestic Product, GDP (Soludo, 2006a). This represents three times the nation's education budget, nine times the public health budget - a significant drain for a country faced with an illiteracy rate of 57.0% and other social, economic and environmental maladies.
- ii. Poor resource utilization.** Nigeria, despite her enormous natural resources and huge economical prowess as exhibited in the early 1970s, has retrogressed to become one of the twenty-five poorest nations in the world at the threshold of the twenty-first century; this is primarily due to poor resource utilization (Igbuzor 2006a; Odumodu, 2008). Corruption has gradually become a norm in our everyday life; proceeds from crude oil and other natural resources are not justifiably expended to meet the actual needs of the citizenry. A large proportion of the country's population does not have access to the basic needs of life decent housing, good education good road

and transport system, standard and accessible hospitals, drinkable and pure water, effective power or electricity system, affordable communication system, etc despite the huge revenue accruing to the nation's treasury (Arah 2008; EFA Global Monitoring Report 2002; Igbuzor 2006b).

- iii. The pervasive corruption in the country.** Corruption in Nigeria has made our country unattractive to foreign investors because the cost and risk of doing business increases with corruption.

These factors remain a clog in the efforts to achieve sustainable development in Nigeria.

The first National Millennium Development Goals Report (2004) showed that Nigeria is far from meeting the targets of achieving any of the goals by 2015 (Lawson, 2007). However, given the right policy environment, the probability of realizing some of the targets (especially those relating to the achievement of universal primary education, ensuring environmental sustainability and developing a global partnership for development) is high. There are however strong indication that Nigeria may not be able to meet the other goals of eradicating extreme poverty and hunger, reducing child and maternal mortality and combating HIV/AIDS, malaria and other diseases. The report uncovered several weaknesses in project implementation procedures and Information Gathering and Management System in Nigeria. For example, there is a lack of sustained gathering of relevant information to aid policy decision-making. This, to a large extent is due to the perceived gulf between the producers and users of information (Haris, 2004). Measuring the poverty targets and indicators will consequently remain very difficult as the last "reliable" and "generally acceptable" poverty data for Nigeria were published in 1996.

However, in 2001 the Federal Government put-up some reform programs in order to stimulate sustained economic growth. These reforms were to act as catalysts towards fast tracking the achievement of the MDGs in the country by 2015 (NPC, 2001). The pivot of stimulating economic growth was anchored on the introduction of the National Economic Empowerment and Development Strategy

(NEEDS) initiative of the Federal Government of Nigeria in 2004; NEEDS thus became Nigeria's mid-term plan for socio-economic reform. The NEEDS focus is aimed at achieving sustainable development, wealth creation, value re-orientation and employment generation (Aremu, 2003). Furthermore, the NEEDS vision should drive Nigeria to fulfill her potentials of becoming Africa's largest economy and a major player in the global economy by the year 2020.

With NEEDS, greater transparency was introduced in the conduct of government business through the institutionalization of 'Due Process'. The war against corruption was intensified with the establishment of the Independent Corrupt Practices and other Related Offences Commission (ICPC) and the Economic and Financial Crimes Commission (EFCC). In addition, greater fiscal prudence and budget discipline were introduced among many other measures and all these are yielding positive results. As a result of the improvement brought by these reforms which has affected the way we run and manage our economy, the nation witnessed a growth rate averaged at 8.2% between 2003 and 2004 in her Gross Domestic Product (GDP) as against the average annual growth rate of 3.5% recorded in the last decade (Soludo, 2006b). For the first time in a long while, the growth rate of the GDP exceeded the rate of population growth. The non-oil sector also witnessed tremendous growth. With the advent of positive results from the proper implementation of the NEEDS programme, states and local governments embraced the framework of NEEDS through the development of their respective State Economic Empowerment and Development Strategy (SEEDS) and Local Economic Empowerment and Development Strategy (LEEDS) programmes. The resulting potentials for policy coordination between the three tiers of government are facilitating the achievement of the Millennium Development Goals in Nigeria.

The approach adopted by Nigeria at achieving the MDGs cum sustainable development has immensely helped her negotiate her debt relief from the Paris Club of Nations. This has resulted in a "saving" of about \$1 billion per annum that would have otherwise been spent on debt servicing (Soludo, 2006a). This "saving" is supposed to be channeled

towards achieving the MDGs as articulated in the NEEDS programme through the funding of immunization and primary health care programmes, HIV/AIDS, tuberculosis and malaria treatment and prevention campaign, recruitment of teachers, rural electrification projects, youth and value orientation programmes, rural water supply projects, road infrastructure developments, slum upgrading, environmental and agriculture issues (see NPC, 2007). Given the current policy environment and the strong political will of government, there is an enhanced potential of attaining the MDGs in Nigeria.

3.0 The Information and Communication Technology (ICT) Intervention

Information and Communication Technologies (ICTs) are fundamental infrastructure for economic development and growth (Said Assar *et al.*, 2009). Their adoption and large scale diffusion are, recognized as a strong enabler and catalyst for economic, social and human development. In a globalized world, ICT offers opportunities for new enterprises. It leads to the emergence of new economic activities through connecting people and giving access to large amounts of information and a wide range of services at affordable cost; people can participate in improving their living condition through the development of healthcare, education, environment, and community services. The enhancement of human capacity in ICT is basically the acquisition of the basic Information Technology (IT) skills (Hagen, 2004; Op de Coal, 2003). This also includes an increased access to information in diverse areas of human endeavor.

The future of any nation will in its entirety be knowledge driven, and so the generation and exploitation of knowledge has become a determinant of the creation of wealth and the survival of any nation (Annan, 1997). This will obviously require greater flexibility in the way information is generated, disseminated and used. The emerging ICT-related technologies will impose new and strict skill and manpower constraints which only e-learning can overcome and this will obviously enhance capacity development in Nigeria thereby resulting in multiplier effect in other areas of human endeavors including, job creation, wealth creation, poverty reduction and global economic competitiveness. A typical example

is the advent of Global System of Mobile Telecommunication which has created huge employment opportunities in the areas of telephone call services, repairs of handsets, construction of canopies, GSM chairs and tables etc. These are all pathways that constitute the highways to the MDGs destination.

3.1 Use of ICT to Eradicate Poverty and Hunger

Ilaboya *et al.* (2007) asserted that people must be empowered with adequate knowledge and information capable of changing their world for the better before they can break-off from poverty. This entails the recognition of the relevance of vital and adequate information gathering, dissemination and use in nation building and poverty reduction. "People" as mentioned above should be considered to mean individuals, communities, private and public companies, local, state and federal governments. In this section, we present the possible use of ICT to reduced poverty and hunger and in doing so we specifically state those areas where ICT can be applied and how to apply it to reduced poverty and hunger.

3.1.1 Agriculture

Nigerian ICT Development National Policy, 2001 stipulates that ICT will be used to re-engineer agriculture in order to maximize food production, improve food self sufficiency and security, increase output for industrial raw material utilization, provide employment, economic growth and minimize environmental abuse and degradation. To achieve this, the policy statement states that Geographical Information Systems (GIS) would be developed to monitor the environment and plan sustainable environmental usage; agricultural extension services would be revitalized through the empowerment of farm extension workers with IT skills in areas such as digital mapping, land use, soil types, meteorology, ecology, oceanography, hydrology, and agricultural records, while agricultural information system are to be established to provide support for planning, production, storage and distribution of agricultural produce and natural resources. Farmers would therefore have access to information on weather, market prices or even place order for goods and

service online.

3.1.2 E-Governance

E-Government entails the execution of government activities, services and information dissemination via ICT tools (Ilaboya *et al.*, 2007). Technology experts including Nigerians have asserted that Information and Technology driven economy is the only way to sustain any nation's economic, political and environmental future (Singh, 2002; Elebeke, 2009). They also adopted e-governance as the only tool that could engender good and people oriented governance in any nation, Nigeria inclusive. Since it is possible for the developed nations of the world to get it right through technology and e-governance, Nigeria can as well leapfrog from its present status of underdevelopment to a fully developed global giant.

Technology and e-governance have become critical tools for achieving good and people oriented governance as evidenced in some developed countries and few states in Nigeria, as well as some Federal parastatals where it was adopted. The system have proven to be the most transparent, accountable and fastest system of governance any where in the world. However, the growth of technology and adoption of e-governance may appear easy, but require total commitment, political will and honesty on the side of the operators, by creating the enabling environment such as computerizing all government parastatals and schools, training and retraining of staff on ICT applications, constant power supply and infrastructural repairs. ICT tools can help our leaders and decision makers perform much better through the following use:

- i. Computer-aided registration of land deeds and stamp duties, reducing reliance on brokers and possibilities for corruption.
- ii. Computerization of rural local government offices for delivery of statutory certificates of identity and landholdings thereby substantially reducing delays.
- iii. Computerized check points for local entry taxes, with data automatically sent to a central database thereby reducing opportunities for local corruption.
- iv. Consolidated bill payment site, allowing

citizens to pay bills under different categories in one place.

- v. E-mail requests for repairs and development of basic rural infrastructure (such as electrical power line and bore-hole generator) can be promoted, thereby reducing reliance on incessant visits of government functionaries.
- vi. Computerization of voter's registration and implementation of electronic voting thereby reducing electoral malpractices.

3.1.3 Conflict Resolution

Conflict resolution (Zimako, 2007) is aimed at eliminating wars and avoiding the building-up of arms; this requires communication and compromise by the people involved. Communication here means effective dialogue; by this we mean "bringing two warring parties to real time discussion without having to meet together" since people or parties at war naturally will not like to see each other until certain level of trust is guaranteed. ICT plays an important role in achieving this, as it allows people (even foes) to have real time discussion without necessarily seeing each other physically. Negotiation for the release of people held hostage and brokering of peace between the aggrieved parties (e.g. the Niger Delta Emancipation Groups and the Federal Government of the Republic of Nigeria) are grand examples of the role and use of ICT tools for ensuring peace and stability. Thus ICT is an effective tool for conflict resolution and further goes a long way directly and indirectly at reducing poverty and hunger.

3.1.4 Creation of Wealth and Job opportunities

ICT provides real opportunities for people to access information on job opportunities. This is done via text messaging, web adverts placement, electronic media such as TV and radio, etc. The adoption and use of ICT tools have also resulted in better, faster and easier data processing thereby enhancing industrial and managerial performance. Now, goods can be ordered and paid for through the Internet.

Quicker, better and transparent services are now also rendered by banks through the use of ICT tools; the Automated Teller Machine (ATM) is one of the ICT tools that have greatly improved banking in

Nigeria. Commercial transactions and activities have also been improved; a call is all that is required for negotiation and business transaction between the producer (be it at the remote or city centre) and the consumer. All these are provided on the platform of ICT tools and we can estimate how much wealth could be created and saved, how much life could be saved and improved, how much time could be saved and invested, etc if ICT facilities are installed in all the local government areas of Nigeria.

3.2 Universal Basic Education and Gender Equality

The introduction of ICTs and its integration into the Nigerian education sector has initiated a new age in educational methods of teaching and learning patterns as well as offering contemporary learning experiences to both instructors and students (Nwachukwu *et al.*, 2007; Singh, 2002). The use of ICT tools in remote villages will not only ensure that villagers have access to important information that can spur them to send their children to school but also make distant learning programs easier for them and their children. Electronic media, an ICT tool, can also be used and is rightly in use in educating both the rural and urban dwellers on the rights of women and the gains of educating the female child just like their male counterparts. The goal of gender equality can be achieved this way.

3.3 Improved Health

The goals of reducing child mortality, improving maternal health and combating HIV/AIDS, malaria and other diseases are generally considered here. Networking health institutions through Internet connectivity ensures that information can be collated and shared through on-line and web-based resources. Such ICT based healthcare systems can help management access healthcare statistics that will enable them make prompt decisions. In this way ICT can be used to combat serious national health treats such as HIV/AIDS pandemic, leprosy, physical disabilities. ICT tools can be used to transfer patient's records for clinical purposes; individuals and healthcare workers can equally access information on certain illness and their palliative measures (Ilaboya *et al.*, 2007). The achievement of this goal

among the MDGs should not only be considered in the light of treating patients who are already ill but should include ways of preventing people from falling ill through the dissemination of information on health risks, feeding habits, and sanitary conditions, etc. The availability, affordability and accessibility of ICT tools will greatly help in reducing child mortality while at the same time improving maternal healthcare.

3.4 Environmental Sustainability

The campaign to end rapid deforestation and environmental pollution requires that the people involved in the unhealthy practices know the dangerous consequences of their actions. How can they know if they are not told, and how can they be told if they do not have access to any ICT tools? We need to address the issue of environmental pollution and degradation associated with organic and inorganic wastes disposals, felling of trees, excavation of sand, oil spillage and river pollution, aquatic and wildlife extinction, etc (Osibanjo and Nnorom, 2007). ICT tools give us the opportunity of educating the populace on the need, ultimate and non-negotiable task of preserving our environment for the coming generation. Through satellite information, disasters such as desert encroachment, wild fires, locust invasion, etc can be monitored and controlled.

3.5 Global Partnership for Development

The achievement of this goal requires concerted efforts of the entire global community. Terrorists activities, wars, natural but avoidable disasters, internet hacking, epidemics etc can undermine efforts to achieve it both at the national and international levels; if the global financial melt down could be traced to America (Straw, 2008), then any of the above mentioned undesirable activities in one country can as well have a negative impact on another country. ICT offers opportunities such as global networking (which according to Tipson (2003) is not just networking of computers and information, but also entails strong evolving social ties and long-term collaborations) which is achieved through the integration of converging knowledge and economic activities between developed and developing countries in the form of exchange of ideas and security information, economic potentialities, educa-

tional and research collaborations, developmental policies, etc.

4.0 Conclusion

Nigeria can successfully achieve sustainable development by harnessing the great opportunities presented to it by the ICTs as this will not only ensure that she attains both the internationally set Millennium Development Goals and the national set developmental targets, but likewise sustain any development attained. Information and communication technologies will help in ascertaining our level of development, transparency in running both the government and private sectors, commitment to policies and other developmental indicators such as the country's population fraction that have access to the basic facilities of life (e.g. good health care, free basic and primary education, drinkable water, good road and transport system etc). There is no nation that can prosper on the basis of her natural resources or wealth alone but on economy built on transparency and global partnership as encouraged by ICT and e-governance. There is therefore the need for Nigeria to embrace the diverse opportunities ICT offers for development.

References

- Adeyemo O.A. 1991, "The Nigerian Planning Experience", Oxford University Press, England.
- Annan, K. 1997, "Secretary General Stresses International Community's Objective of Harnessing Informatics Revolution for Benefit of Mankind", in United Nations Commission on Science and Technology for Development, 'Inter-Agency Project on Universal Access to Basic Communication and Information Services', 3rd Session, Geneva, 12 May, E/CN.16/1997/Misc.3.
- Arah, G 2008, "Nigerian performance in the Housing Sector since independence", Business day, January 12, 2008.
- Aremu, A.J. 2003, "NEEDs – The Right Step in the Right Direction", Framework Pub. Lagos.
- Bezanson, K., and Sagasti, F. 1995, "The Elusive Search: Development and Progress in the Transition to a New Century", Ottawa, Canada: International Development Research Centre and Lima, Peru: GRADE, mimeo.
- EFA Global Monitoring Report 2002, "Education for all: Is the world on Track", Paris, UNESCO.
- Emmanuel Elebeke 2009, "Nigeria: Eminent citizens support for ICT", Vanguard Newspapers. allAfrica.com.Nigeria.htm.
- Gerster, R. and Zimmerman, S. 2003, "ICT and Poverty Reduction in Sub-Saharan Africa", Gerster Consulting, Switzerland.
- Hagen, I. 2004, "Embedding ICT in Development", European Centre for Development Policy Management, Maastricht.
- Igbuzor, O. 2006a, "The Millennium Development Goals: Can Nigeria meet the Goals in 2015?", A paper presented at a symposium on Millennium Development Goals and Nigeria, 27th July, 2006.
- Igbuzor, O. 2006b, "The state of Education in Nigeria", A key note Address Delivered at a Round Table Discussion organized by the Civil Society Action Coalition I, Education for all (3rd July, 2006).
- Ilaboya, I. R. and Abayomi, A. 2007, "The Role of ICT in Human Development and Poverty Reduction", Nigeria Journal of Policy and Development, **5 & 6**, 132-138.
- Lawson, O. 2001, "Nigeria, the Blind Economic Vision", Adgozo Ltd., Lagos.
- Mansell, R., and Wehn, U. 1998, "Knowledge Societies: Information Technology for Sustainable Development", New York: Oxford University Press.
- Mody, B., 1999 "The Internet in Developing Countries", Paper presented at the ASIAPAC - 21, UNESCO-UKM Conference, April 26 – 29, 1999, Universiti Kebangsaan Malaysia, Bangi, Malaysia.
- National Millennium Development Goals Report 2004, Nigeria, http://www.endg.org/archive_docs/5430_Nigeria_MDG_Report_-_ExecutiveSummary.pdf
- Nigerian ICTD National Policy 2001, National Information Technology Development Agency (NITDA), January 1, 2001.
- NPC 2001, "Nigerian Population and Health Survey", National Population Commission. Abuja.
- NPC 2007, "Nigerian Population and Health Survey", National Population Commission. Abuja.
- Nwachukwu, P. O., Andrew, B.N. and Daniel, E. 2007, "ICT and Distance Education Programs in

- a Sub-Saharan African Country, A Theoretical Perspective”, *J. of Information Technology Impact*, **7** (3), 181, 2007.
- Odumodu, J. 2008, “Nigeria has no robust health insurance scheme”, *Nigeria Compass*.
- Ohmae, Kenichi 1996, “The End of the Nation State - The Rise of Regional Economies”, New York: Free Press Paperbacks.
- Op de Coul, M. 2003, “ICT for development Case Studies”, Synthesis Report, OneWorld International and Building Digital Opportunities, Bellanet, Ottawa.
- Osibanjo, O. and Nnorom, I. C. 2007, “The challenge of electronic waste (e-waste) management in developing countries”, *International Solid Waste Association*, SAGE, <http://wmr.sagepub.com>
- Osuji, E. 2007, “MDGs - Breaking the Poverty Chain”, Givani Books Inc. Kano.
- Reddi, U.V., 1986, “Leapfrogging the Industrial Revolution”, in *The Myth of the Information Revolution: Social and Ethical Implications of Communication Technology*, Michael Traber (Ed.), London: Sage.
- Said, Assar, Redonane, El Amarani and Richard T. Watson January 2009, “ICT education in developing economies”, *Information Technology for development (ITD) Journal*, URL; <http://www3.interscience.wiley.com/journal/109863476/home>.
- Sen, A. 1999, “Development As Freedom”, New York: Knopf.
- Singh, N. 2002, “Information Technology and India’s Development”, UC Santa Cruz, July 2002; <http://129.3.20.41/eps/dev/papers>
- Soludo C.C. 2006a, “Law Institution and Nigeria’s Quest to join the first World Economy”, Kas Publishers, Lagos.
- Soludo C.C. 2006b, “Can Nigeria be the China of Africa”, Kas Publishers
- Straw, W. 2008, “The Global Meltdown”, http://www.americanprogress.org/issues/2008/12/global_meltdown
- Tipson, F. S. 2003, “Networking Development-ICT for Millennium Development Goals”, Interactive Workshop on “Global Information and Communications Technologies Initiatives: Across Borders and Sectors” Washington, D.C.
- World Bank 2002, *Development Quarterly Report D/RS.28/2002/MISC.13* Geneva
- Zimako, O.Z. 2007, “The Universality of Conflict Resolution: Bridging with Communication and Compromise”, *Nigeria J. of Policy and Development*, **5 & 6**, 94-107.